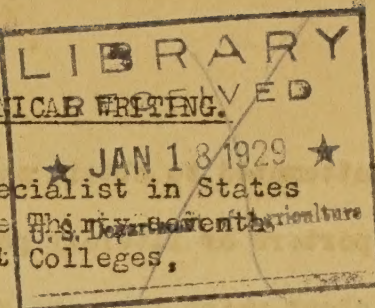


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SELECTED LIST OF REFERENCES ON SCIENTIFIC AND TECHNICAL WRITING.



A bibliographical report submitted by Dr. A. C. True, Specialist in States Relations Work, U. S. Department of Agriculture, at the Annual Convention of the Association of Land-Grant Colleges, Chicago, Ill., November 14, 1923.

In accordance with the action of this Association in 1920 the bibliography presented herewith has been prepared under the direction of the Specialist in States Relations Work by Miss Martha L. Gericke, librarian of the Office of Experiment Stations.

The bibliographical report last year dealt with the preparation and use of illustrations as an essential in supplementing the written word. This year it was thought that perhaps a short list of selected references on scientific and technical writing might be opportune.

The teaching of "agricultural journalism", "industrial journalism" or scientific and technical writing has now been taken up by many of our leading colleges. Up to a short time ago, however, the courses offered in journalism or writing in general at our colleges and universities were usually along purely literary lines. The fact that scientific men needed special courses in writing was not generally recognized and many of the scientific workers now in service have had no training with definite reference to the literary work they are called upon to do. For some reason students in agricultural and engineering courses often have a contempt for good style in writing. Too often such men after college days find it difficult to explain the processes they employ or to give clear descriptions of their work and its results.

The general public of today is more interested in scientific and technical matters than ever before and is ready to read about them. The managers of popular journals have such a poor opinion of the writing ability of scientists that they have in many cases either avoided them entirely or have

attempted to obtain popular records of their work through the agency of reporters or literary persons with little or no knowledge of the subject-matter about which they are writing. We know with what unsatisfactory results this method is usually employed. It is, however, idle to expect a reform in the popular presentation of scientific subjects until there are more people with scientific knowledge who can write well.

The mass of current literature on almost all branches of science has become so great that even specialists have great difficulty in keeping up with the record of progress in their respective lines. And this burden is greatly increased by the faulty and obscure writing too often found in scientific journals. The usefulness of an investigator is very much lessened unless he is able to impart his knowledge to others through the medium of clear, concise language. The strength and progress of scientific teaching and research are very dependent on the character of scientific literature. The value of technical writing as an educational factor is often as great to the writer as it is to any of the readers. It develops in the writer observation, analysis, logical thinking and presentation of facts, concentration, unity, accuracy of expression and statements. The good writer besides advancing his field of science also gains in reputation and authority.

Before attempting to transfer facts and our thoughts about them to the minds of others, we must ourselves have a very clear conception of the subject. The clearness with which we express ourselves reflects in large measure the clearness of our own thoughts. It is said that Schopenhauer divided writers into three groups. The first and largest group included those that wrote without thinking; the second thought and wrote at the same time; the third group, a very small one, thought before they even began to write. The only sufficient reason for writing should be the belief that the record of our experience would

be of value to others. Its value is lost or greatly diminished by obscure or clumsy presentation of the facts and the writer's interpretation of them.

Huxley's theory of style was "to say that which has to be said in such language that you can stand cross-examination on each word".

Standard symbols, accurate citations, carefully checked lists of references and bibliographies also add a great deal to the value of a scientific paper. There would probably be general agreement that where statements are actually quoted, credit should be given and that acknowledgement should be made of assistance given by others in preparation of any paper, but alas! this little poem of Kipling's which is so fittingly brought in by Mr. R. Fleming in one of his articles in the following bibliography too often has direct application in the scientific writing of our day.

When 'Omer smote 'is bloomin lyre,
He'd 'eard men sing by land an' sea,
An' what he thought 'e might require,
'E went an' took - the same as me.!

The market-girls an' fishermen,
The shepherds an' sailors too,
They 'eard old songs turn up again,
But kept it quiet - Same as you.!

They knew 'e stole; 'e knew they knowed,
They didn't tell nor make a fuss,
But winked at 'Omer down the road,
An' 'e winked back - the same as us.!

There may be a justifiable plagiarism by poets, novelists and historians but not by scientists.

In preparing this list we have had in mind three major types of writing which the members of this Association might be interested in. First the purely scientific or technical writing which describes investigations or discusses scientific truths and methods. Under this type would come the contributions to professional journals, monographs, bulletins and reports. The next type

is more concerned with the popularization of scientific facts and conclusions and under it would come the writing for newspapers, popular bulletins, extension bulletins and circulars, and semi-scientific or popular journals. Under the last type is included writing for that form of publication which business concerns call a house organ - a publication which either sells the work or project to the community or sells the job to the workers. The extension service news, the college paper, the college press bulletins and the farm bureau news might be cited as examples of such publications.

Many of the institutions or colleges with which the members of this association are connected have definite style books to be used in the preparation of manuscripts for printing. For the benefit of those who may not be familiar with such books, a number of recognized manuals of style have been included in this list. They are very useful guides to authors in matters of punctuation, capitalization, methods of preparing bibliographies, selecting of type, proofreading, etc. A number of the titles included in this list are also textbooks used in giving courses in technical and scientific journalism. As a rule these books give the general principles of exposition and also include examples of scientific writing chosen from well recognized authors.

As many of the articles do not readily lend themselves to listing by classes it was decided to use an alphabetical arrangement by authors. It is hoped that owing to its shortness, the lack of a classed arrangement will not prove an inconvenience in the use of this list.

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